

CLAIMS

1. Method of manufacturing, from a strip of possibly  
5 perforated sheet material (17), a structured  
packing corrugation (1), the overall surface of  
which is generated substantially by sweeping a  
repetitive profile (4) parallel to the edges  
10 (2, 3) of the strip, along a directrix (8) which  
is non-rectilinear over at least part of its  
length and having a main orientation which is  
oblique with respect to the edges of the strip, in  
which a folding-pressing operation is carried out  
on the strip (17) in successive steps, by means of  
two opposed dies (11, 12) with a relative movement  
15 alternating between coming together and moving  
apart, these dies having active surfaces (11, 12)  
which are substantially conjugate with the two  
faces of the corrugation, characterized in that  
the strip is made of metal.  
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2. Method according to Claim 1, characterized in  
that, in at least one non-rectilinear region, at  
least some convex apexes (13A to 16A) of at least  
one die (11, 12) have a reduced height compared  
25 with that of an adjacent rectilinear region.
3. Method according to Claim 2, characterized in that  
all the convex apexes of the two dies (11, 12)  
have a reduced height in each or one  
30 non-rectilinear region.
4. Method according to Claim 2 or 3, characterized in  
that the said reduction in height is progressive  
from the said adjacent rectilinear region.  
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5. Method according to any one of Claims 1 to 4,  
characterized in that the strip (17) is perforated  
before the folding-pressing operation is carried  
out.

6. Method according to any one of Claims 1 to 5,  
characterized in that the strip (17) is annealed  
before it undergoes folding-pressing, at least in  
the regions of this strip which correspond to the  
non-rectilinear regions (10) of the directrix (8).
7. Method according to any one of Claims 1 to 6,  
characterized in that the directrix (8) has a  
rectilinear main part (9) and at least one curved  
end part (10) which ends substantially  
perpendicular to the edges (2, 3) of the  
corrugation (1).
8. Method according to Claim 7, characterized in that  
the directrix (8) has an elongate S-shape, with a  
rectilinear main part (9) and two curved end parts  
(10) which end substantially perpendicular to the  
edges (2, 3) of the corrugation (1).
9. Method according to any one of Claims 1 to 8,  
characterized in that the profile (4) is zig-zag  
shaped with substantially rectilinear sides (5).
10. Method according to any one of Claims 1 to 9,  
characterized in that the corrugation (1) is a  
cross-corrugated packing corrugation.
11. Method according to any one of Claims 1 to 10,  
comprising the step of making the sheet-metal  
strip (17) advance in successive steps between the  
dies in the open position thereof.
12. Device for implementing the method according to  
any one of Claims 1 to 11, characterized in that  
it comprises two opposed folding-pressing dies  
(11, 12), the generatrices of which comprise at  
least one non-rectilinear part, means to move  
these dies with a relative movement alternating

between coming together and moving apart, and means (17, 18) to make a strip (17) of sheet material advance in successive steps between the dies in the open position thereof.

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13. Device according to Claim 12, characterized in that, in at least one non-rectilinear region, at least some convex apexes (13A to 16A) of at least one die (11, 12) have a height which progressively  
10 decreases from an adjacent rectilinear region.

14. Device according to Claim 13, characterized in that all the convex apexes of the two dies (11, 12) have a height which progressively  
15 decreases in one or each non-rectilinear region.

15. Device according to any one of Claims 12 to 14, characterized in that it comprises means (B) for annealing the strip (17) at least in the region or  
20 regions thereof intended to be folded in a non-rectilinear manner, these annealing means being located upstream of the dies (11, 12).

16. Device according to Claim 15, characterized in that the said annealing means (B) are located  
25 downstream or upstream of the perforation means (C).

17. Apparatus for treating fluids, especially for the  
30 exchange of heat and/or mass between two fluids, characterized in that it comprises at least one working section (20) equipped with a cross-corrugated packing consisting of corrugations (1) made by a method according to any  
35 one of Claims 1 to 11.